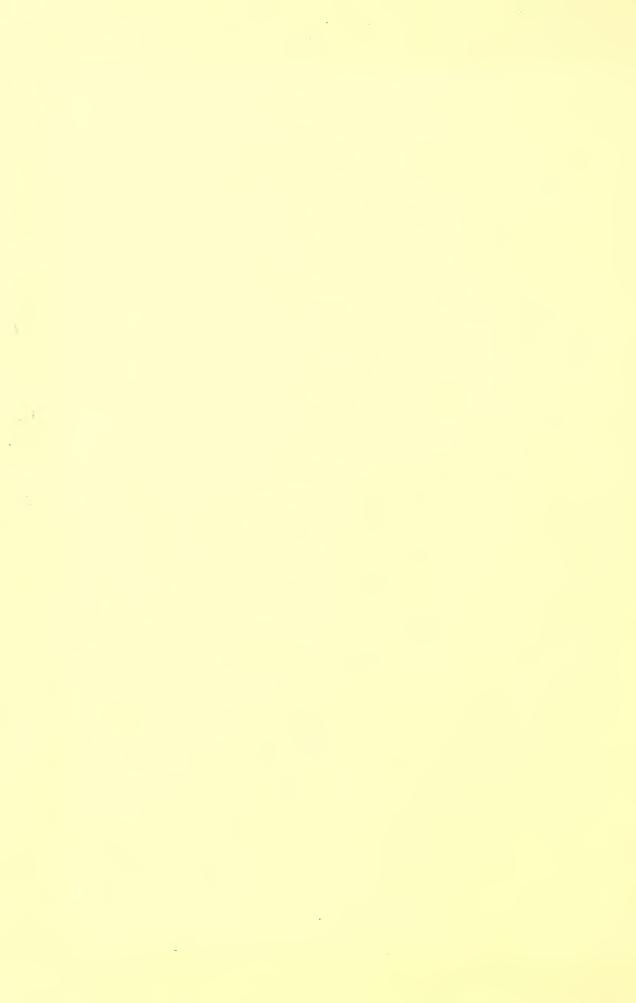
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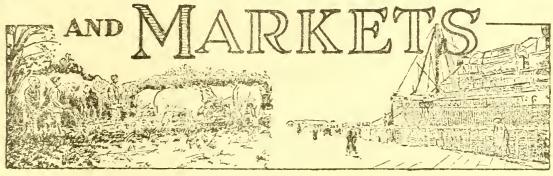
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# EUREAU OF AGRIC ECOLO

## FOREIGN CROPS



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#### FEATURE ARTICLE

#### BREAD GRAIN CONSUMPTION AND TRADE IN HUNGARY

#### IN THIS ISSUE

	Page
United States spring wheat acreage intentions	295
European winter wheat crop prospects favorable	295
European wheat markets weaken	296
Shanghai wheat and flour markets firm	298
European-bread grain stocks large	299
Summary of recent feed grain information	300
Danube Basin exportable surplus of feed grains remains large	301
Chinese cotton mill activity declines	302
United Kingdom takings of North American apples below 1933-34	302
United Kingdom apple prices low	303
Danube Basin lard exports heavy.	303

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#### LATE CABLES

At London wool sales up to March 22 the U. S. S. R. had been buying Merinos, chiefly 64's and 70's, at about 40 to 45 cents per pound, clean basis, a price too high for competition from domestic users and equal to those prevailing in January.

Best greasy crossbreds were again in demand. Slipes were often a half-cent above the lowest point of the preceding week. Sales scheduled to close March 26. Many greasy Punta Arenas, New Zealand crossbreds, and some scoured lambs' wool from Victoria, which were intended for sale that week, have been withdrawn.

(Agricultural Attachè E. A. Foley, London, March 22, 1935.)

No New Zealand Futter shipments to New York since March 1. (Consul General Euclin, Wellington, March 18, 1935.)

#### CROP AND MARKET PROSPECTS

#### BREAD GRAINS

#### Summary of recent information

The United States acroage of all spring wheat indicated for harvest in 1935 by reports from farmers on their intentions to plant as of March 1, 1935, shows a decline compared with the acreage sown in 1934. The acreage of winter wheat sown last fall for harvest in 1935 was larger than the previous year's sowings. The indicated total is not, however, strictly comparable with either the planted or harvested acreage of 1934, since no estimate of winter-kill or abandonment of winter sowings is yet available, and actual spring sowings may differ widely from intended sowings. It now appear though that winter-kill will be somewhat above average, but even so, the total acreage of wheat for harvest in 1935 will be well in excess of last year's extremely low acreage.

UHITED STATES: Wheat acreage, planted, harvested, and indicated

for harvest, specified years

AND THE RESIDENCE OF THE PARTY	A O A	102 1000,	200011100	Jean		
0.000	Acrea planted	-	Acr	Acreage indicated		
Grop	1933	1934	1932	1933	1934	for harvest in 1935
	1,000	1,000	1,000	1,000	1,000	1,000
	acres	acres	cres	acres	acres	acres
Durum wheat	3,140	2,046:	3,946	2,310	990	2,042
Other sprin	21,160	16.475	17.952	17.115:	8,300	15,805
All sprin wheat	24,300	18,521	21,898	19,425	9,290	17,847
Winter Whoat	42,669	41,850	35,216	28,485	32,945	b/ 44,306
Total wheat	66,969:	60.371	57.114:	47,910	42,235	b/ 62,153

a/ Shown is of general interest only. Not directly comparable with narvest indications for 1935. b/ Not directly comparable with harvested acreage as no allowance is made for winter-kill, which is expected to be above average.

#### European winter crop prospects

With the usual winter weather prevailing in European countries during February, crop growth and farm work were generally inactive, except in parts of Southern Europe, according to Assistant Agricultural Attache Gordon P. Boals at Berlin. With some exceptions, such as are reported from Czechoslovakia, crop conditions during February were generally favorable, although the extent of winter-kill and other damage is not yet known. In the Danubian countries, the condition of winter wheat continued good to very good in spite of the severe cold experienced in February, according to the Belgrade office of the Foreign Agricultural Service. A deep snow cover protected the plants against the cold and stimulated stooling; frost damage was reported from : few sections only, where storms swept the snow away.

#### CROP AND MARKET PROSPECTS, CONTID

Except for increased sowings of winter wheat in the U.S.S.R., acreage changes in continental Europe are expected to be of little significance, Mr. Boals reports. Increases reported for some countries are expected to be offset by reductions in others. The Belgrade office, however, still estimates the winter acreage of the Danube Basin at 20,015,000 acres, an increase of about 6 percent over the sowings for the 1934 crop. The preliminary estimates of winter-sown acreages in Germany, recently issued by the government, show declines for rye and wheat and increases for barley and rapeseed, which are in accordance with earlier indications of the probable trend of German acreages this season. They are also in line with the present policy of the government, which has favored an expansion in feedstuffs and oilseeds at the expense of bread grains. The preliminary estimates of fall-sown acreages in Czechoslovakia indicate an expansion in the area sown to winter cereals as compared with the acreage harvested in 1934. Compared with the preliminary estimate of sowings in the fall of 1933, however, a marked reduction in all the winter crops is noted. Since winter-kill and other damage seem likely to be above average this season, it is possible that the final estimate of fall seedings for harvest in 1935 will also show considerable deviation from the preliminary estimate.

#### Market conditions

#### Europe

Prices of wheat continued variable during February on the different European markets, but a definite downward trend was noted on most free markets, Mr. Boals reports. Import takings of overseas wheat continued in about the same volume as reported in previous months. Net imports into 18 continental European countries from July 1, 1934, to February 28, 1935, are placed at 102,000,000 bushels as compared with 104,000,000 bushels imported in the corresponding period of 1933-34. The net import requirements of these countries for the entire season of 1934-35 are now estimated at 168,000,000 bushels as compared with actual takings in 1933-34 of 156,000,000 bushels. Domestic rye prices showed little change during the month. Exportable supplies of rye in Europe are becoming rather limited, although they have been ample thus far to take care of the restricted demand at current prices.

Trading in bread grains and flour was very quiet in <u>Germany</u> during the month under review, with transactions made on a hand-to-mouth basis. Moderate offerings of bread grains were sufficient for the rather slow demand prevailing, but there was a continued deficiency in the supply of feed grains. Holland and Belgium still dominate the import trade in wheat in

#### CROP AND MARKET PROSPECTS, CONT'D

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continental Europe, and a fair volume of business was recorded at Rotter-dam and Antwerp. Prices at Rotterdam, however, declined during the first week of February, and quotations late in the month, contrary to the trend in overseas prices, were 8-10 percent lower than they were earlier.

The grain market in Czechoslovakia was generally quiet until late February, when the prospective increase in fixed prices, usual at the end of the month, stimulated buying interest and mill activity. A recent investigation of the Grain Monopoly is reported to have resulted in the discovery that stocks of wheat and rye on January 1 amounted to about 30,104,000 and 12,511,000 bushels, respectively. This supply, together with some 3,674,000 bushels of wheat purchased from Yugoslavia, should be sufficient to meet domestic bread grain requirements from January 1 to July 1, 1935, without further imports. It suggests, however, that the 1934 harvest was underestimated and that a decrease in consumption has taken place, due perhaps to the higher level of prices prevailing under the Monopoly.

While only moderate buying of wheat and rye was reported on the Austrian markets, prices were firm, especially in the second half of February, and turnover showed a significant increase. Since Austria will have a rather large import deficit for this season, negotiations were under way for further purchases from Argentina, as well as for the importation of wheat from other countries. The depressed state of the grain market in Poland reported for January continued through February. Wheat prices were mostly unchanged, and little business was transacted. Market-supporting measures were applied mainly to rye, offerings of which were, however, not very large. During August-December 1934, rye exports totaled about 8,444,000 bushels as compared with 8,314,000 bushels in the corresponding period of 1933. About 50 percent of the rye exported was shipped to the United States, 18 percent to Germany, and 16 percent to Belgium. A small quantity of wheat was also exported, the total for August-December being about 735,000 bushels as compared with a net import of 404,000 bushels in August-December 1933.

The market for bread grain in <u>Sweden</u> was firm during February, but supplies of French wheat in Denmark and Norway hampered Swedish sales to these countries. Quiet trading and declining quotations were reported from the grain markets of <u>Denmark</u> during the first half of February, but prices around February 15 still ranged from 10.50 to 11.00 Kronor per 100 kilograms (62 to 65 cents per bushel).

The poor condition of country roads in the <u>Danube Basin</u>, combined with the farmers' desire to hold wheat for speculative reasons, resulted in small <u>Geliveries</u> and exceptionally high local prices, the Belgrade office reports.

#### CROP AND MARKET PROSPECTS, CONT'D

Exports of 10,645,000 bushels of wheat and wheat flour during July-February left an apparent carryover of about 18,750,000 bushels on March 1. In view of the quantities of Argentine wheat available to European countries at low prices, it appears doubtful whether the Danubian surplus can be disposed of before June 30, with prices materially above world parity. Although the central European countries have generally preferred to cover their needs in the Danube Basin on a barter basis because of currency transfer difficulties, recent Austrian imports have shown preference for Argentine rather than Hungarian or Yugoslav wheat. In the hope of changing this situation, minimum prices in Hungary will be abolished on April 10, it has been announced by the Hungarian Government, and radical changes in the Rumanian wheat relief system are to be made. It is hoped that these measures will result in increased offers from farmers, lower prices, and the resumption of exports on a larger scale.

#### Shanghai

The Shanghai flour mills booked about 597,000 bushels of Australian wheat during the week ended March 15, according to a radiogram from the Shanghai office of the Foreign Agricultural Service. Further purchases will probably be made in order to supply requirements until the new crop of domestic wheat becomes available in June. The flour market continued firm during the week, with the demand from Tientsin still strong. The demand from Manchuria was, however, much lower during January-March than in the corresponding months of 1934 because the Manchurian exchange situation favors the Japanese yen rather than the Shanghai dollar. The mills in Shanghai were running at about 65-percent capacity, which is somewhat above the March activity of 1934. Stocks of flour in Shanghai mills, placed below 100,000 bags, were lower than they had been for many months.

Wheat prices, c.i.f. Shanghai duty included, for March shipment, were quoted as follows: Argentine 74 cents per bushel, Australian (South Australia) 79 cents, Swedish 72 cents. Domestic flour for March delivery was 89 cents per bag of 49 pounds, April delivery 88 cents. Australian flour, c.i.f. Hongkong, was \$2.80 per barrel of 196 pounds.

#### Rye and maslin in the Danube Basin

Winter sowings of rye and maslin in the Danube Basin, as estimated by the Belgrade office of the Foreign Agricultural Service total about 3,818,000 acres. This is a decrease of some 124,000 acres from the figure reported for January and compares with 3,773,000 acres sown in the fall of 1933 for the 1934 harvest and 3,862,000 acres, the 1928-1932 average of fall sowings. The reduction noted in the February report was due to a

#### CRÓP AND MARKET PROSPECTS, CONT'D

decrease in the official estimate for Bulgaria, which, however, the Belgrade office considers as yet incomplete. The condition of winter rye and maslin is good. After the severe cold of February a heavy snow protected the plants until the recent season of mild weather.

From the exportable surplus of rye and maslin, placed at about 2,362,000 bushels, it is estimated that about 1,445,000 bushels had been exported from July 1, 1934, to February 28, 1935. Of this, 1,169,000 bushels came from Hungary. Exports during February amounted to about 295,000 bushels, all destined for Austria. On account of the high prices prevailing in Hungary and the scarcity of offers, Austria has authorized the importation of 98,000 bushels of rye from Argentina, has made negotiations for Polish rye, and has brought in some Yugoslav rye. Because of the continued scarcity of deliveries, it is believed that the available rye surplus in Hungary is relatively small and that existing stocks are being held by farmers for higher prices. Consequently, quotations during February showed an increase. In the other Danubian countries, where rye is not an important export commodity, local needs were filled with prices showing practically no change.

#### Estimated bread grain stocks in Europe on August 1, 1934

Until recently carryover stocks of old crop grain in continental countries have generally been of little significance, except possibly in the Danube Basin. Most countries were on an import basis and the year-end carryover of old crop grain consisted almost entirely of foreign descriptions.

The record crops of wheat and rye harvested on the Continent in 1932 and again in 1933 resulted in an accumulation of domestic grains which in some countries assumed burdensome proportions. On August 1, 1934, for example, continental stocks of old-crop wheat were estimated to be about 20 percent as large as the eventual 1934 harvest. The bulk of this carryover was domestic grain.

As a result of these changed conditions, it was felt advisable to attempt an estimate of the year-end carryover of old grain on the Continent. The following comments have been taken from a report prepared by Gordon P. Boals, Assistant Agricultural Attaché in Berlin. It should be kept in mind that these estimates are the first of a proposed series and, as such, naturally have certain limitations.

According to Mr. Boals, there were 286,598,000 bushels of old-crop wheat and 86,058,000 bushels of old-crop rye of all descriptions on hand

#### CROP AND MARKET PROSPECTS, CONT'D

in 19 continental European countries on August 1, 1934. In addition, it was estimated that there were 33,253,000 bushels of old-crop wheat and 4,252,000 bushels of old-crop rye in the four Danubian countries on the same date.

Estimated minimum year-end requirements in the above 23 countries are 130,770,000 bushels of wheat and 56,808,000 bushels of rye. The difference between stocks on hand August 1 and minimum year-end requirements does not, however, necessarily represent the effective surplus of old-crop grain in Europe on that date, if by "effective surplus" we mean grain that will enter the usual market channels. Much of the old-crop wheat and rye on hand August 1, 1934, was unfit for human consumption. The feeding of this grain, the denaturing of considerable amounts of wheat in certain countries, and the usual loss from spoilage and handling would greatly reduce the amount available for the bread-grain trade channels.

Most of the carryover on August 1, 1934, was concentrated in France, Germany, and Italy, though supplies of old-crop grains were apparently also much above normal in Czechoslovakia, Poland, Spain, and Sweden. Mr. Boals states that in many of the countries government agencies control the grain stocks and in some others there are large mill stocks. This would indicate that in general farm stocks were not excessive, though in the Danube Basin, France, and Poland they represent a large share of the total.

The small crops of wheat and rye harvested in Europe in 1934 and the policy of most importing countries of restricting grain imports to a minimum make it seem likely that the European carryover of old-crop grain on August 1, 1935, will be reduced to well below the previous year.

#### FEED GRAINS

#### Summary of recent feed grain information

The March estimate of farmers' intentions to plant barley in the United States for the 1935 harvest is 11,954,000 acres compared with a sown acreage of 11,378,000 acres and a harvested acreage of 7,144,000 acres in 1934. The estimate of intentions to plant oats is 39,108,000 acres compared with the 1934 area of 37,976,000 acres sown and 30,395,000 acres harvested. The estimate of intentions to plant corn is 95,692,000 acres against the 1934 area of 95,319,000 acres planted, and 87,486,000 acres harvested.

#### CROPAND MARKET PROSPECTS, CONTID

Orders for about 12,800,000 bushels of new crop corn from Argentina had been taken in the United States up to March 15.

A quota of 4,100,000 bushels has been fixed in Spain for the imports of corn for the current year. The Ministry of Industry and Trade and the Ministry of Agriculture will issue the necessary import licenses, and the customs authorities will fix the amount of import duty to be paid.

#### The Danubian situation

Material damage to winter barley has been reported from some sections of Rumania, according to a report from the Danube Basin office of the Foreign Agricultural Service. Winter barley, however, represents only a small percentage of the total, and in the other Danubian countries the barley and oats have wintered well.

The exportable surplus of corn from the Danube Basin for the 1934-35 season, including the carryover from 1933-34, was estimated at 77,900,000 bushels, of which 56,400,000 bushels were still available after March 1. In spite of large surpluses in Rumania, exports from that country have been relatively small on account of the frequent changes in government regulations relative to methods of delivery to the Rumanian National Bank of foreign credits obtained. A sale of 236,000 bushels of Rumanian corn was recently made to the United States.

Corn exports from the large 1934 crop of Yugoslavia have been heavy. Bilgarian exports have been proportionate to their small crop. Exports from Hungary completely ceased in February, as a result of exceptionally large hog feeding, and it is probable that no more corn will be shipped this year in spite of the good crop. Unusually high prices prevailed in that country, and the government permitted the importation of 400,000 bushels of Rumanian or Yugoslav corn in order to reduce domestic prices.

The exportable surplus of barley from the Danube Basin for 1934-35 Was estimated at 21,800,000 bushels, of which 12,400,000 bushels were still available after March 1. After November, Rumanian barley exports experienced the usual seasonal drop, but small quantities have been sent to Germany on a compensation basis.

The Danutian exportable surplus of oats was estimated at 2,800,000 bushels, of which 2,000,000 bushels were still available after March 1. It is not expected that oats exports will be important during the remainder of the marketing year.

#### CROP AND MARKET PROSPECTS, CONT'D

#### COTTON

#### Outlook for Chinese cotton mills uncertain

Chinese cotton mill activity during the first two months of 1935 has on the whole been unfavorable, and an uncertain tone still prevails, according to a radiogram received from Agricultural Commissioner Dawson at Shanghai. During January and February Chinese mills operated at about 70 percent of their capacity, while Japanese mills in China operated at about normal capacity. The British owned mills were closed due to labor trouble. The continued low price of yarn and the restriction on credits caused by the stringent condition in the local money market have contributed to the generally unfavorable plight of the Chinese mills. It is estimated that many mills are losing on every bale of yarn they sell. While the price of locally-grown cotton declined during February, the price of yarn also declined, resulting in a further unfavorable relation of cotton prices to yarn prices.

Arrivals of locally-grown cotton at Shanghai during February showed a marked decline when compared with January. Imports of foreign cotton for January (in bales of 500 pounds) were 14,364 bales of American, 6,250 bales of Indian, 5,782 bales of Egyptian, and 8 bales of other growths. The preliminary estimates of arrivals at Shanghai for February are: American 10,548 bales, Indian 1,481 bales, and Egyptian 2,903 bales. Stocks in Shanghai warehouses on February 28 were reported at 253,000 bales, of which 81,000 bales were American, 4,000 bales Indian, 2,000 bales Egyptian, and 165,000 bales local cotton.

#### FRUITS, VEGETABLES, AND NUTS

#### North American apple exports to the United Kingdom below 1933-34

Shipments of North American apples to the United Kingdom during the 1934-35 season to February 23 amounted to only about 7,875,000 bushels compared with 11,276,000 bushels during the corresponding period of the 1933-34 season, according to information available in the Foreign Agricultural Service. This is a decline of 30 percent and is almost entirely accounted for by a decrease in Canadian shipments, due chiefly to smaller crops. The United Kingdom has been well supplied this season, however, because of the larger than usual European crops. Exports from Canada up to February 23 amounted to 4,789,000 bushels as against 8,159,000 bushels during the corresponding period of the 1933-34 season. United States exports

#### CROP AND MARKET PROSPECTS, CONTID

to the United Kingdom during this period amounted to 3,086,000 bushels compared with 3,117,000 bushels the preceding season.

#### United Kingdom apple prices low

Although prices of barreled apples have been adversely affected since the first of the year in the United Kingdom by the uncertainty in condition of the fruit, this does not completely explain the rather low prices prevailing for apples in general, according to reports from F. A. Motz, Fruit Specialist, representing the Foreign Agricultural Service in Surope. Home-grown apple supplies have been heavier than usual and competing fruits, such as oranges, grapefruit, pears, bananas, and other fruits, have been plentiful. The fruit supply situation has no doubt ad-Versely affected the price returned for American apples, supplies of which have not been burdensome this year. Possibly the light supplies of American apples that have landed in the United Kingdom in the last two years have Changed consumer habits some, since familiar varieties, such as Yorks, Wine-Saps, and Yellow Newtowns, have not been sufficiently plentiful in the rural sections to maintain consumer interest. Low purchasing power has also been a factor in keeping down prices. Certainly the high transportation charges, outies and handling costs make a heavy burden for the consumer to bear. Condition of the fruit, however, has been an important factor affecting prices. This season is generally considered a "scald year," although not so cad as those seasons prior to the general adoption of oiled-paper wraps. Barreled apples that are free of scald are the exception and buyers are taking no chances. Although boxed apples have shown better condition than was expected early in the season, there have been some complaints of the fruit tasting and smelling oily.

#### LIVESTOCK, MEAT, AND WOOL

#### Danube Basin lard exports heavy

Lard exports from the Danube Basin countries during February are estimated at about 6,173,000 pounds by the Danube Basin office of the Foreign Agricultural Service. Of this total, Hungary, supplied about 5,512,000 pounds, the remainder coming from Yugoslavia. This latter country has had heavier exports during the past three months, chiefly to Austria and Ozechoslovakia. Exports from the Basin in January amounted to 5,139,000 pounds and in February 1934 to only 385,000 pounds. Total exports for the calendar year 1934 are officially placed at 32,203,000 pounds. Of this cuantity, Hungary supplied 28,858,000 pounds.

Hungary has an area of 35,654 square miles, or smaller than that of the State of Indiana, and a population of slightly less than 9,000,000. It is predominantly a wheat-bread consuming country and one of the few wheat surplus-producing countries of Europe. At one time Budapest, the capital of this country, was the world's premier flour-milling center. The modern system of milling originated in Hungary and for a long time the mills of that country led the world in milling science and technique. During this period of leadership, Hungarian milled flour commanded the top price in the markets of the world.

#### Production of wheat and rye

During the prewar period, 1909-1913, annual wheat production within the present-day boundaries of Hungary averaged 71,493,000 bushels. (See table, page 314.) In recent years production has been somewhat higher, averaging for the 1924-1928 period 74,859,000 bushels and for the 1929-1933 period 78,539,000 bushels, this latter figure representing an increase of nearly 10 percent over prewar production. Annual rye production during the prewar period, 1909-1913, averaged 31,377,000 bushels (see table, page 313), an amount less than one half as great as that of wheat. Unlike wheat, rye production in recent years has been lower than in prewar times, averaging for the 1924-1928 period 28,199,000 bushels, and for the 1929-1933 period 29,891,000 bushels. Because of an unusually severe drought in Hungary during the spring and summer of 1934, both the wheat and rye crops were the lowest in recent years.

#### Foreign trade in wheat and rye

Hungary's foreign trade in wheat and rye is almost solely as exports. Normally the country produces a surplus over domestic requirements of about 20,000,000 bushels of wheat and from 5,000,000 to 10,000,000 bushels of rye. This surplus grain is usually exported to other European countries, principally Austria, Czechoslovakia, Italy, Switzerland, and Germany. Formerly the major portion of these exports consisted of flour, but in recent years the greater part has been grain. The milling capacity of Hungary is still great enough to grind the exportable wheat and rye surpluses into flour, but the import flour market has been killed in most countries by duties and import restrictions more discriminatory against flour than against grain. See table on page 315 for statistical data on wheat and flour exports.

#### Domestic wheats

In the 19th century, before the hard wheats of North America had become known on the markets of the world, Hungarian wheats were highly

By J. H. Shollenberger, Grain Specialist, Foreign Agricultural Service. Based on studies made in Europe.

esteemed for their quality. The superior quality of the former, however, has considerably lessened the prestige of Hungarian wheat. The introduction during the World War period of high-yielding varieties which were of poor baking quality also had a damaging effect on their reputation. Since the World War, production of these varieties has continued to a greater or lesser extent, with the result that the quality of Hungarian wheats still falls short of the prewar standard.

Hungarian wheats at the present time are predominantly red in color and of winter habit. Less than 2 percent is spring sown. Some wheat of the durum species is produced, but a great preponderance of the production is of the common type (Triticum vulgare). In texture or hardness of kernel, the common wheats range from soft to hard with the bulk of them either of soft or semi-hard texture. The soft wheats resemble the soft red winter wheats of eastern United States. Some of the wheats of hard texture resemble the United States Hard Red Spring type and some the United States Hard Red Winter type.

The moisture content of Hungarian wheats is relatively low as compared with that of the wheats of western Europe. Especially is this true at harvest time. According to information obtained from the Cereal and Flour Research Institute at Budapest, the usual moisture content at harvest time is 10 to 11 percent. After the fall rains begin, it rises to 12 to 14 percent.

The commercial wheats of Hungary frequently contain an appreciable percentage of foreign matter. Rye, vetch, and corn cockle are the principal kinds. Smut balls and nematode galls (Tylenchus tritici, Steinback, Bastian) are of common occurrence, but are not present to any great extent.

The principal wheat-producing area of Hungary is a black-soil plain which usually is not and relatively dry during the ripening and harvesting season of the year. This wheat belt is somewhat similar to the great wheat-production areas of Kansas and Nebraska. The wholes of best quality are produced in the driest and hottest section of this plain. As in the United States, these high-quality wheats are much sought after by the domestic millers, who generally are willing to pay a premium for them over wheat of ordinary or average quality.

At the town of Croshaza, reputed to be the producing center for the wheats of best quality, a number of the larger milling concerns of Hulpary maintain buying agencies during the radiating season of the year. To this town farmers from the surrounding counter tring their theat in Weights and "stand on market," in much the same manner as do vegetath and neat men who market their products in open merket places. In the principal wheat marketing season of the year the main street of the town on market days is lined with farmers! vagons containing wheat on display for sale. Buyers make the rounds of these wagons examining the various lots of wheat

offered and bidding on those which they desire to buy. The test weight of the wheat and its quality, as indicated by appearance are taken into account by the buyer when bidding. If the bids received by the farmer are not satisfactory to him, it frequently happens that he will haul his grain back home to be marketed some other day when he hopes a more favorable price will be offered. The extra time and labor involved in taking wheat to market a second time is given little consideration by the farmer because it is usually done at the season of the year when work is slack and when the farmer can receive no other compensation for his time or for his horses' services.

As mentioned before, the quality of Hungarian wheats deteriorated during the World War and this condition continued for some time after the war. About 1928, however, the government began to take definite action to effect an improvement in quality. Through the three government plant-breeding stations located in the various agricultural regions of the country, seven improved varieties, adapted to local conditions were at first selected as the medium through which the government proposed to improve the quality of the domestic wheat crop. Later the number was reduced to four. Seed from the selected varieties multiplied in such a manner that in 1931 there was available approximately 10,000 bushels of high-grade seed wheat. This seed wheat the government in the fall of 1931 distributed among large estate operators for further multiplication for seed purposes. In the fall of 1932 approximately 367,000 bushels of improved wheat were distributed to farmers and in 1933 approximately 550,000 bushels. These distributions and the government's propaganda for variety improvement resulted in the planting of about one third of the entire acreage of the country with the improved wheat in the fall of 1933. Government officials expect that by 1936 practically the entire wheat production of Hungary will be of these selected varieties.

All of the selected varieties are of red color. Some of them are of the Soft Red Winter type, while the others are either of the Hard Red Winter or Hard Red Spring types. Probably the most important of the improved varieties from the standpoint of quality and acreage planted is Bankuti No. 1201, which is a cross between a wheat of the original Hungarian type and Marquis. It somewhat resembles Marquis wheat in physical appearance.

As evidence of the improvement already made in the commercial wheats of Hungary, it has been said that, whereas the quality of Hungariay export wheat was often criticized before 1933, foreign buyers have repeatedly given testimonials of their satisfaction during the 1933 and 1934 crop years. This improvement in the quality of Hungarian commercial wheat increases its competitive potentiality with American wheat in foreign markets. Moreover, it is reported that the newly introduced varieties are more productive than those which they are replacing. If this is true, then the decrease in acreage which has occurred in recent years should be partly offset by the increase in yield.

#### Government regulations affecting the grain and milling industries

The need for governmental assistance to the Hungarian wheat producer began in the 19th century when the competition of American wheats, both on the domestic and the world markets, forced the price of Hungarian wheats below the cost of production. To correct this situation, a 6 gold-crown per quintal duty was placed on imports of wheat into Austria-Hungary. Shortly after the beginning of the 20th century even this duty proved to be ineffective protection against American competition. In consequence, farmers requested that the import duty be im reased to 9 gold-crowns. This request was granted and the higher rate became valid in March 1906. Apparently this gave the protection desired, because available cost of production data show profitable returns to the wheat growers for the years from 1906 to the outbreak of the World War.

Because of the separation of Austria and other territory from Hungary at the conclusion of the World War, the Hungary of today has a somethat different problem in respect to the disposal of her wheat crop than formerly. The great shrinkage in the domestic market resulting from these separations has greatly increased the importance to her agricultural industry of her export trade in wheat and flour. The Hungarian farmer's concern now is the competition of foreign grain in the world market rather than on the domestic market. This latter has been taken care of by the virtual prohibition of importations of foreign wheat and flour, but the former could not be treated so simply.

Since the war the Hungarian Government has intervened in the grain trade to improve the farmer's condition. It has exercised various monopolistic powers through the medium of certain permanent institutions set up for the purpose of regulating internal and external trade; and with these as a nucleus it has resorted to a number of measures on the side of control technique. Most striking among these is the "grain ticket" system adopted July 15, 1930. Under this system a prospective purchaser of wheat, rye, or their mixture, both imported and domestic, had to obtain a permit in the form of a grain ticket from the local municipal authorities at a cost fixed by decree each crop year. The proceeds from the sale of these tickets went into a central fund known as the cereals valorization fund. Included with the ticket was a coupon which had to be detached and given to the producer so that in addition to the selling price of the grain he received a coupon which was redeemed by the government. As the grain moved from one buyer to another, each was obligated to purchase the accompanying ticket, minus the coupon, from the preceding owner. In the case of exports of grain and flour the government took up these tickets and reimbursed the exporter in order that Hungarian grain and flour could compete in the world market. This, in effect, constituted a bounty on exports. In the case of milling for domestic consumption, the miller received no reimbursement. Thus, in this instance the ticket system was in effect a processing tax, the tax being paid through the medium of the government-issued, coupon-bearing

ticket purchased by the original buyer of the grain. The redemption value of the cupon given to the farmer constituted a premium above the world market price for wheat.

By a governmental decree effective July 1, 1934, the grain ticket system was abolished and the premium previously received by producers was replaced by other farm-aid measures consisting of (1) a refund of land tax, (2) a reduction in the amount of obligatory public work to be done by farmers, (3) a reduction of the railway freight rates on certain agrarian products, and (4) the promotion of the sale of farm products.

Other measures which have been put into effect for the wheat farmers! assistance in recent years include the following: For a short time
bremiums were paid on the exportation of wheat or its equivalent in flour,
mounting to as much as 3.5 pengos per quintal (16 cents per bushel). A
futy of 35 cents per bushel, plus a 3 percent tax, was placed on wheat imborts, and on imports of wheat flour there was placed a duty of about \$2.35
ber barrel, plus the turnover tax of 3 percent, Special trade agreements
here made with several western European countries which have secured for
aungarian wheat preferential access to their markets.

#### Milling practices

As mentioned before, the modern process of milling originated in amgary, and for a long time Hungarian mills maintained world leadership in milling science. During this period of leadership, Hungarian flour was supposed to be the best in the world. This flour was sold in all important flour import markets of the world and commanded the top price. In recent years, however, Hungarian mills have lost a goodly share of their prestige. This is due mainly to two facts: First, the milling technique employed nother countries has advanced to a plane of equality with that in Hungary; and, second, wheats superior in quality to Hungarian wheats are being procliced in abundance in certain other parts of the world. This loss of presige, together with the discriminatory measures adopted in recent years by creign countries against flour imports, has resulted in a great shrinkage in the exports of flour from Hungary. Because of this shrinkage in trade, anumber of the largest Hungarian mills have been forced out of business.

The unprosperous condition of the Hungarian milling industry in recent years has prevented the Hungarian miller from making the necessary Changes in equipment and operating technique for keeping up with the improvements made in some other parts of the world. As a consequence, most of the mills of Hungary are old, as is also the equipment used in them.

The milling process in Hungarian mills is the longest in the world. These mills make a greater number of mill stock separations for subsequent

purification and reduction and a greater number of different grades of flour than do the mills in any other country. The extra equipment and handling required for all these operations adds to the cost of production and, since there has been little profit in milling in recent years, it is reported that there has been some tendency among Hungarian millers toward a shortening of the milling process, somewhat along the lines of that followed in other countries, in order that production costs might be reduced. It is not likely, however, that this tendency will be continued to a point corresponding to the American process, but it is probable that any steps taken in this direction will not be retraced at a later date for the reason that today more importance in respect to flour quality is attached to the inherent quality of the wheat and less to the miller's cleverness or the milling process used.

Mill laboratories in Hungary are not so well equipped as in America. nor does the cereal chemist play as important a role in the operation of the mill. Milling is looked upon as a highly developed art rather than a science, and more dependence in mill operation is placed on the cleverness and experience of the miller than on any chemical analyses. It is true that chemical determinations are made, but not nearly to such an extent as in American mills.

Routine moisture determinations are made on wheat and flour. Ash determinations are made on flour for mill control purposes, but not necessarily for establishing the grade of flour. The miller primarily depends on the Pekar color test for guidance in limiting his flour extractions and in separating the various grades of flour. Protein content determinations are seldom made, as it is believed that this factor is not a reliable indication of baking strength. Formerly the washed-gluten test was depended upon to indicate the baking strength of a wheat or flour, and it is still widely employed in many mills for this purpose. In a number of the larger mills, however, the Bradender farinagraph is now used for this purpose. It is reported that this apparatus was originally devised by a Hungarian, Dr. Stephen Hankoczy, Director of the Cereal and Flour Research Institute at Budapest.

Hungarian millers claim flour extractions as high as 80 percent, but such extractions include Red Dog and some Shorts. Bran is the only socalled mill offal, or by-product produced. Moreover, this bran is not of the broad flaky type characteristic of the American article, but is in small thin flakes.

Quite a number of different grades of flour are produced. These are based mainly on granulation and color differences and are designated according to a system that is partially indicative of granulation, color, and quality. The most usual assortment of flours produced is covered by the designations No. Ogg, No. Og, No. O, No. 2, No. 4, No. 6, No. 7, and No. 7-1/2. Some mills make more grades of flour than these and some less, but the designations given them are in accordance with the preceding nomenclature. The

letter "g" in the name signifies coarseness of granulation and the numerical digit the purity or quality of the flour. Thus the designation No. Og means a coarse, short, patent flour. No. Ogg also means a short patent flour, but of coarser granulation than Og. If a still coarser short patent flour is made, it is designated as No. Oggg. Some mills make a No. Og flour, but the "g" degree of granulation does not extend to any of the grades below No. 2 Also in-between grades of flour are sometimes produced. These are designated No. 6-1/2, No. 7-3/4 or by some other number which most nearly fits the quality.

The coarse flours produced are for use in making pastries, certain kinds of cakes, noodles, and dumplings. The No. O and No. 2 grades are the best quality fine-granulation flours produced and are the grades generally exported. The No. 4 grade is the common white flour used in the production of domestic white bread. No. 5 flour is used in the production of the so-called half brown bread. No. 4, mixed with No. 5, is also used in making half brown bread. No. 6 flour is used in the production of brown bread. Grades of flour lower than No. 6 are usually used for feed. According to one miller interviewed by the writer, the ash content (dry matter basis) of flours Nos. Ogg, Og, O, and 2, is approximately 0.40 percent; of No. 4, 0.76 percent; of No. 5, 1.11 percent; and of No. 6, 1.77 percent.

In Hungary the moller system of milling is employed in the small grist mills in the country districts, as well as in the large commercial mills. In this respect the milling industry is on a higher plane of development than in most European countries where the old-stone-buhr type of grist mill is still in active service.

At one of the grist mills, visited by the writer, a mill with a grinding capacity of approximately 60 barrels of flour per twenty-four hours, farmers' wheat grists were being exchanged on the following basis: For each bushel (sixty pounds) of clean wheat of average test weight the farmer received:

8.4 pounds of No. Og flour,
27.0 pounds of No. 4 flour,
1.8 pounds of No. 6½ flour, (shorts),
14.4 pounds of bran,
51.6 pounds.

A peculiarity of the milling industry of Hungary is that many of the steam mills located in the villages and smaller cities operate Turkish baths as a means of utilizing the exhaust steam from their engines.

#### Baking practices and kinds of bread consumed

There are a number of bread bakeries of the modern factory type in Hungary, but these are found only in the larger cities. In the smaller

cities and villages the production of bread is only by the proprietoroperated shop type of bakery, which type is also of considerable importance even in cities where the factory type of bakery is located but in
such cities its importance is chiefly in the production of luxury or
special bakery products. According to a baker interviewed by the writer,
nearly 95 percent of all bread consumed in Budapest is made in so-called
bread factories. The baking of bread in the home is practiced only in
country districts.

The factory type of bakery operates a chain of sales shops for the distribution of its products to the consumer. This type of bakery also wholesales some of its bread products to grocery stores, but its luxury and special products are sold to the public only in its own sales shops.

The baking equipment used by Hungarian bakers does not generally consist of many mechanical devices. Except in the factory-type bakeries, generally the only machines used are a slow-speed mechanical mixer of the bowl type and a hand-operated dough divider for roll making. The type of oven most generally used is the hearth-fired type:

In villages some housewives make up their bread doughs at home and then take them to the commercial bakery for baking. One baker visited by the writer was charging 4 filler (1.2 United States cents, converted at the exchange rate prevailing February 20) per kilogram (2.2 pounds) for this service. Such bread is usually baked in loaves weighing five kilograms (11 pounds) each.

The loaf type of bread consumed in Hungary is of three sorts or qualities, namely, brown, half brown, and white. The brown bread is the cheapest in price, the half brown next cheapest, and the white the most expensive. In the city of Budapest, the half brown bread is the kind most commonly used. Approximately three fourths of the loaf type of bread consumed in that city is of this kind. Brown bread consumption amounts to about 24 percent and white bread to about 1 percent of the total. The common, or half brown, bread has a medium fine-grained, moist crumb, but nevertheless is of light and spongy texture. The crust is harshand think and of a dark brown color. This bread has a pleasing flavor. The loaves are generally of oval shape and are usually of two-kilo size.

Rolls, of which a considerable quantity is consumed, are of many sorts and qualities according to the form into which they are made and according to their composition. As a general practice rolls are made only from the best grades of flour; consequently, any differences in quality which occur are chiefly due to the other ingredients used and to the manner of baking. One sort, called "water bun," contains no ingredients other than water, flour, yeast, and salt. This is the cheapest kind of roll. In the better or more expensive sorts of rolls, milk, fat, and sugar in varying proportions are used. In general the quality of Budapest rolls is very good, but not quite

so good as that of rolls made in Swiss cities. Rolls in Budapest have a brown, thin but crisp crust and a close-grained and somewhat dry interior.

The retail price of brown bread is regulated by the government, but for other forms and sorts of bread bakers are permitted to charge whatever price they please. The prices prevailing in Budapest on May 25, 1934, for various sorts of loaf breads were as follows:

Kind of loaf bread	Price in fill	lers per kilogram
	Wholesale	Retail
Brown	_	22 (govern-
		ment fixed)
Half brown	28	32
White	32	36

The flour used in making brown bread is a mixture consisting of 85 percent No. 4 (equal to a "second clear" or "low grade") wheat flour and 15 percent rye flour. The half brown bread is made from No. 6 ("first clear") flour. The white bread is made from a patent grade of flour of medium coarse granulation. This flour is said to have an ash content of about 0.40 percent.

The cost price to the baker, on May 25, 1934, of the various flours used in the production of bread in Budapest was as follows:

No. 6 flour - 24 fillers per kilogram No. 4 flour - 29 fillers per kilogram Patent flour - 31 fillers per kilogram

A quick fermentation sponge-dough method of procedure is generally used in the making of the common bread. The leavening agents used consist of sour dough and a small quantity of yeast. Two formulas are in general use in the production of this bread. They are as follows:

Formula No. 1: Flour - 100 kilograms
Water - approximately 60 kilograms
Salt - 2 kilograms
Yeast - never more than 1 kilogram

Sour dough

Formula No. 2: Flour - 100 kilograms

Water - approximately 50 kilograms
Boiled potatoes - 25 kilograms (moisture content
approximately 50 percent)

Salt - 2 kilograms
Yeast - never more than 1 kilogram
Sour dough

The procedure followed in preparing these dougns is about as follows: A dough is prepared by mixing one half of the flour intended for baking with some sour dough kept over from a previous baking, a small quantity of yeast, and with whatever quantity of water is necessary to give the desired consistency to the dough. This dough is permitted to ferment for a period of 2 or 3 hours, then the other half of the flour, the salt, and more water are added and mixed together thoroughly. This is the final mixing. The dough resulting from this mixing is allowed to ferment about three fourths of an hour, after which it is divided into portions of the desired size for baking. Next the individual portions of douch are placed in baskets for a half hour's proofing before baking.

If the formula used in baking is the one which includes boiled potatoes, this ingredient is added at the time of preparing the first dough. The potatoes used for this purpose are not boiled by the baker but are purchased already boiled.

RYE: Acreage, production, yield, trade, and amount available for consumption in Hungary, averages 1909-1913, 1924-1953, annual 1929-1934

Year	Acreage			Imports	Exports	Available for consumption b/		
		tion	acre	<u>=</u> /	<u> </u>	Total	capita	
Average:	1,000 acres	1,000 bushels	Bush- els	l,000 bushels	1,000 bushels	1,000 bushels	Bush- els	
1909-1913 1924-1928 1929-1933	1,608 1,652 1,590	31,377 28,199 29,891	17.1	<u>c</u> / 140 <u>a</u> /	<u>c</u> /14,150 6,410 4,291	21,792	.8 2.6 2.9	
1929 1930 1931 1932 1933 1934	1,623 1,611 1,486 1,553 1,677 1,632	31,423 28,406 21,672 30,301 37,654 20,197	19.4 17.6 14.6 19.5 22.5	<u>리</u> / 리리/ 이	5,942 3,319 2,712 3,003 6,481	•		
	1 1002	60,137	1014	0 0 0	9 9 0 1	6 6 1	1	

Foreign Agricultural Service Division. Trade figures are from the records of the Division of Statistical and Historical Research and the International Institute of Agriculture.

a/ Year beginning July 1: flour included, converted on the basis of 6 bushels per barrel. b/ Stocks at beginning and end of period disregarded. c/ Year beginning August 1; International Institute of Agriculture. d/ Less than 500 bushels.

WHEAT: Acreage, production, yield, trade, and amount available for consumption in Hungary, averages 1909-1913, 1924-1933,

	annual 1929-1934								
	A	creage		Production					Yield
Year	Winter	Spring	To tal	Winte	Winter Sp		Spring Total		per acre
Average: 1909-1913. 1924-1928. 1929-1933. Annual: 1929 1930 1932 1933	1,000 acres - 3,731 3,869 3,648 4,121 3,952 3,747 3,879	1,000 acres - 47 55 60 66 59 46 45	1,000 acres 3,712 3,779 3,925 3,708 4,187 4,011 3,793	77, 74, 83, 71, 63,	els ,015 ,737 ,071 ,336 ,849 ,935	1,	<u>s</u> 843 802 914 003 701 528	84,339 72,550	19.3 19.6 20.1 5 20.2 20.1 18.5 17.0
1934	***		3,924 3,921	· .	, 494		862	61,446	15.7
	Imp	orts <u>a</u> /	Exports <u>a</u> / Available consumpti			ion b/			
	Wheat	Flour c/	Wheat		Flour c/		7	otal	Per canita
Average:	l,000 bushels	l,000 bushels	1,00 bushe			000 hels	Ì	1,000 oushels	Bush- els
1909-1913 1924-1928 1929-1933. Annual: 1929 1930 1931 1932 1933	d/ 7,214 212 1 1 e/ 2	2 1 2 1 1 <u>e</u> /	11 14 17 9 13	2,116 ,182 ,229 2,718 2,090 5,053 5,123 5,160	1	9,200 6,677 3,697 9,335 5,011 1,887 3,455		29,591 54,691 57,635	1.4 6.5 6.6

Compiled in Foreign Agricultural Service Division from official sources.

a/ Years beginning July.

e/ Less than 500 bushels.

b/ Stocks at beginning and end of periods disregarded. c/ Converted to grain on basis of 4.5 bushels per barrel.

d/ Years beginning August 1, International Institute of Agriculture.

WHEAT AND WHEAT FLOUR a/: Exports from Hungary in terms of grain, by principal countries of destination, 1925-1933

by principal countries of destination, 1925-1933									
Country			1327		1929			1932	
	1,000		1,000		1,000			•	1,000
	bush-	buch				bush-			bush-
WHEAT	<u>els</u>		ols	AND DESCRIPTION OF THE PARTY OF	<u>cls</u>	<u>els</u>	els	els	<u>els</u>
Austria		5,720		3,779		4,422		2,570	
Ozechoslovakia						4,353			1,037
Rumania		. –	1		7	2	62	<u>b</u> /	·
Yugoslavia			5	. 134	3		55	<u>d</u> /	-
Germany	363	584	108	5	1,209	161	66	2,410	
Cwitzerland	124		13	186	1,716	310	1,092	: 24	
Italy	683	2,915	431	237	2,081	3,335	399	1	: 1,657
Bolgium	-	-	-	-	219		602	0/	216
France		-	-	-	65	b/	1,525	-	287
Great Britain	-	U-4		_	_	: -	2,594	6 2	805
Wetherlands		-	-	-	316	_	212	_	-
Greace	2		-	18	569	45	621	_	-
Turkey	.0	0	0	588	773	73	0	0	
Pcland	102	293	1,033	1,254	421	56	0	. 0	_
Other countries	. 0		0		-	1	79	2	6,321
To+-3	0.50	7)1 077		70 1110	7 057	. 750	17 050		116 5 7
Total	8,010	14,001	11,451	10,449	11,001	12,759	1),409	5,200	: LC, 541
WHEAT FLOUR	7	11 700		( 757	0 (((	7 570	1, 500	0 756	. 0 117
Austria	3,525								1
Czechorlovakia									89
Germany			0		,	. – – –			-
Switzerland	14	22							
Italy	75		24		1		•	5/1	151
Poland	2,017		64		18	1			-
Great Britain	12		37	36		,	345	181	109
Rumania	99	-	_	-		<u>b</u> /	-	-	8 mm 8
Turkey		-	-	1	6	-	<u>b</u> /	-	-
Yugoslavia	165	5	-	139		5	-	-	-
Irrway	-	-	23	12			40		1
Other countries	24:	299	33	26	533	228	181	5	109
Total	10 152	8 36)	g 797	10 220	77 hgs	11 800	6 75	7 007	2 50-
2,000	TO, 776	0,004	(2,70)	10,000	1),400	II, CLU	0,004	2,033	C, 051

Official sources.

b/ Joss than 500 bushels.

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a/ Wheat flour in terms of grain. Includes semelina and Ecd Dog flour, converted to grain on the basis of 12 bushels equivalent to 1 barrel of flour.

#### . Index

• •	Page		Pag	çе
Late cables	294	::	Lard, exports, Danube Basin,	
Crop and Market Prospects	295	::	February 1935 30	)3
يسو يسم يسم يسم مس عدم المسم		::	Oats:	
Apples:		::	Acréage, U. S., 1934, 1935 30	0
Exports to U. K., North America,		::	Exportable surplus, Danube	
193435	302	::	Basin, March 1, 1935 30	)1
Price situation, U. K., 1935	302	::	Rve:	
Barley:		::	Acreage (winter), Danube Basin,	
Acreage, U. S., 1934, 1935	300	::	1934, 1935	3(
Crop condition (winter), Danube		::	Exportable surplus, Danube Basin,	
Basin, February 1935	301	::	March 1, 1935 29	9
Exportable surplus, Danube		::	Stocks, Europe, August 1, 1934 29	19
Basin, March 1, 1935	301	::	Wheat:	
Corn:		::	Acreage, U. S., 1933-193529	15
Acreage, U. S., 1934, 1935	300	::	Crop prospects (winter),	
Exportable surplus, Danube		::	Europe, February 1935 29	)5
Basin, March 1, 1935	301	::	Market conditions:	
Import quota, Spain, 1935	301	::	China (Shanghai),	
Cotton, textile situation,		::	March 15, 1935 29	8
China, February 1935	302	::	Europe, February 1935 29	)6
GRAIN:		::	Prices, Shanghai,	
CONSUMPTION AND TRADE (BREAD),		::	March 15, 1935	
HUNGARY, 1934	304	::	Stocks, Europe, August 1, 1934 29	9
Information summary (feed),		::	Wool, sales, United Kingdom,	
March 25, 1935	300	::	March 22, 1935	14